

CLAIMS:

1. A method for data repair in a system capable of one-to-many transmission, the method comprising:
 - 5 transmitting data from a sender to at least one receiver;
 - providing sender driven or receiver driven repair of missing data, concerning data missing at the receiver.
2. The method of claim 1, wherein repair is implemented in a repair session comprising one of the following:
 - 10 re-transmitting missing data in total;
 - re-transmitting only a part of missing data; and
 - repeating original transmission in a whole.
- 15 3. The method of claim 1, wherein an error rate parameter is transmitted from sender to receiver to be used as a threshold in requesting repair of missing data.
4. The method of claim 3, wherein said error rate parameter is used to calculate the threshold in a time and/or data window.
 - 20 5. The method of claim 1, wherein the method comprises indicating to receivers that a session or part of it will be re-transmitted in a point-to-multipoint fashion.
 6. The method of claim 5, wherein said indication is implemented with the aid of a point-to-multipoint repair token.
 - 25 7. The method of claim 1, wherein the method comprises generating random or pseudo-random time dispersion of repair requests to be sent from receiver(s) to sender.

8. The method of claim 7, wherein the method provides for statistically uniform distribution over a relevant period of time.
- 5 9. The method of claim 1, wherein the method comprises using receiver roles.
10. The method of claim 9, wherein one or more of the roles comprise a back-off time given by offset time and random time period.
- 10 11. The method of claim 9, wherein one or more of the roles comprise flag-holder behaviour.
12. The method of claim 1, wherein the method comprises sharing time parameter(s) and/or data parameter(s) and/or error parameter(s) between sender and receiver by pre-configuring.
- 15 13. The method of claim 1, wherein the method comprises indicating from server to receiver, after receipt of a repair request, that repair will be performed only later.
- 20 14. The method of claim 1, wherein the method comprises prioritizing between different repair methods.
- 25 15. The method of claim 14, wherein the method comprises first starting point-to-multipoint repair followed by point-to-point repair.
- 30 16. The method of claim 1, wherein the method comprises using an initiation point for repair sessions/signalling, said initiation point being selected from a group comprising: end of a session, object end, object threshold and end of a session group.

17. The method of claim 1, wherein the method comprises delaying sending of a repair request at the receiver.
18. The method of claim 1, wherein said repair request is delayed with a pre-determined amount of time.
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19. The method of claim 1, wherein a repair request is performed only when the need to consume the data at the receiver arises.
- 10 20. The method of claim 1, wherein a maximum repair availability time is provided.
21. The method of claim 19, wherein the method further comprises taking into account a position of a first loss in data stream.
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22. The method of claim 1, wherein a recovery time is calculated and used in missing data repair.
23. The method of claim 1, wherein a separate repair session is requested and/or started before an initial multicast/broadcast transmission has ended.
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24. The method of claim 1, wherein the method comprises calculating a repair request suppression time to wait before requesting repair.
25. A receiver device for data repair in a system capable of one-to-many transmission, the receiver device comprising:
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means for receiving data transmitted by a sender; and
means for sender driven or receiver driven repair of missing data, concerning data missing at the receiver device.
26. A sender device for data repair in a system capable of one-to-many transmis-

sion, the sender device comprising:

means for transmitting data to at least one receiver; and

means for sender driven or receiver driven repair of missing data, concerning data missing at the receiver.

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27. A system capable of one-to-many transmission, the system comprising a sender device, a network and at least one receiver device, the system comprising:

10 means for transmitting data from said sender device, via said network, to said at least one receiver device; and

means for providing sender driven or receiver driven repair of missing data, concerning data missing at the receiver device.

15 28. A software application executable in a receiver device for data repair in a system capable of one-to-many transmission, the software application comprising:

16 program code for causing the receiver device to receive data transmitted by a sender; and

20 program code for sender driven or receiver driven repair of missing data, concerning data missing at the receiver device.

25 29. A software application executable in a sender device for data repair in a system capable of one-to-many transmission, the software application comprising:

program code for causing the sender device to transmit data to at least one receiver; and

program code for sender driven or receiver driven repair of missing data, concerning data missing at the receiver.